

ASSOCIATION OF

# FEDERAL COMMUNICATIONS CONSULTING ENGINEERS

WASHINGTON, D.C.

**OFFICERS 1994 - 1995**

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June 2, 1995

Mr. William F. Caton, Secretary  
Federal Communications Commission  
Washington, DC 20554

**RECEIVED**

**JUN 5 1995**

FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF SECRETARY

RE: ET Docket No. 95-19

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Dear Mr. Caton:

On behalf of the Association of Federal Communications Consulting Engineers, I am transmitting herewith an original and ten copies of the comments of the association in the above captioned matter.

Please address any questions regarding this filing to me.

Sincerely,

John F.X. Browne  
President

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List A B C D E

*Before the*  
**FEDERAL COMMUNICATIONS COMMISSION**  
*Washington, D. C. 20554*

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**JUN 5 1995**

FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF SECRETARY

In the Matter of )  
 )  
Amendment of Parts 2 and 15 of the )  
Commission's Rules to Deregulate the )  
Equipment Authorization Requirements ) ET Docket No. 95-19  
for Digital Devices )

DOCKET FILE COPY ORIGINAL

**COMMENTS OF THE**  
**ASSOCIATION OF FEDERAL COMMUNICATIONS CONSULTING ENGINEERS**  
**RE: FCC PUBLIC NOTICE DATE FEBRUARY 7, 1995**

The Association of Federal Communications Consulting Engineers (AFCCE) is an organization whose members are registered professional engineers engaged in the practice of consulting engineering or are communications company engineering executives. AFCCE was organized in 1948 and has for over four decades been pleased and honored to share its professional experience and insight with the Federal Communications Commission (FCC).

In Public Notice ET Docket No. 95-19 ("Notice"), dated February 7, 1995, the Commission proposes to amend Parts 2 and 15 of its Rules and Regulations to streamline and relax the equipment authorization requirements for personal computers and computer peripherals. Two primary elements of the Commission's proposal are of great concern to the AFCCE:

- Replacement of the requirement for FCC Certification of personal computers with a self Declaration of Compliance issued by the manufacturer or supplier, and;
- The establishment of procedures for authorizing modular computers and computer components.

The Commission envisioned the potential for widespread interference to communications services from personal computers and peripherals in the late 1970's and, in 1982, adopted the Digital Equipment Authorization Rules. These Rules set limits on radiated and conducted emissions from personal computer systems in order to protect communications equipment from harmful interference. The Commission now believes that it is time to relax the requirements of the Digital Device Rules by allowing manufactures to essentially self-certify their products and to permit authorization of modular computers and computer components. Under the proposed Rules, computers comprised solely of authorized modular components would not have to undergo additional testing to demonstrate overall system compliance with the Rules.

Although AFCCE can appreciate the benefits which the proposed Rules would provide the computer industry and possibly the consumers of these devices, we are concerned that the proposed Rule changes will result in increased harmful interference to communications services such as the radio and television broadcast service, the cellular and PCS services and public safety and business radio services. Because of the unparalleled proliferation of personal computers in our places of business and homes, any Rule change which might result in increased harmful interference from personal computers could have catastrophic results. AFCCE believes that the proposed Rules, if adopted, pose far too great a risk to important communications services and, therefore, we urge the Commission to either maintain the requirement for Certification of personal computers or to make changes in the Rules which incorporate adequate safeguards to insure that no increase in harmful interference will result should the new Rules be adopted.

### **Replacement of Certification with a Declaration of Compliance**

Under the present Rules, a manufacturer or supplier must demonstrate and certify that a personal computer is compliant with the Rules through application to the FCC. The application must be granted by the FCC prior to marketing or selling the device in the United States. This procedure places a mandatory requirement on the manufacturer or supplier to address electromagnetic compatibility (EMC) issues up-front and to present factual test results to the FCC demonstrating system compliance. The existing Rules have been relatively effective in controlling interference from personal computers and peripherals over the past 13 years.

Under the proposed Rules, the manufacturer or supplier of a personal computer can issue a self Declaration of Compliance (DOC) for a new product without having to demonstrate compliance through application to the FCC. Our primary concern with this proposal is that it eliminates the up-front mandatory requirement to demonstrate compliance prior to marketing and selling the product. This procedure takes emphasis away from EMC issues and could result in an increase in harmful interference from personal computer products unless appropriate safeguards are instituted along with any proposed Rule change.

AFCCE supports maintaining the requirement for Certification of personal computers. This process has proven to be effective and provides a high degree of certainty that the final product is compliant. Based on our understanding of the compliance rate of new computer equipment, AFCCE would support allowing marketing and sales of new computer products upon tender of a completed Certification Application to the FCC. This would eliminate the processing time delay in bringing a new product to market but would place the manufacturer or supplier at risk should the Application be dismissed by the FCC.

A second, but higher risk alternative, would be to require that personal computers, for which the manufacturer or supplier issues a DOC, must also be notified. This step could be considered an interim procedure until the Commission gathers sufficient data to insure that the new DOC procedure does not contribute to an overall increase in harmful interference to communications services. Once this determination is made, the requirement for notification could be deleted. This second alternative would have to be accompanied by a strong FCC

sampling program to fully evaluate the impact of the Rule change. Notification during an interim period would supply the Commission with the information necessary to uniformly sample the population of new self-declared computer products in the marketplace. Marketing and sales of new products could be initiated at the time notification is tendered to the FCC.

With regard to sampling and enforcement, AFCCE has observed that this important function of the Commission has experienced disproportionate cuts in funding and now may lack adequate resources to effectively enforce the Commission's Rules and Regulations. We note in this regard the most recent announcement of the closing of several of the FCC field offices. In the "Notice" the Commission states, "we plan to reallocate a portion of our resources that had been used to process equipment certification applications to increased examination and testing of sample equipment on the market." We urge the Commission to make a serious and lasting commitment to an effective sampling and enforcement program. It is difficult for any manufacturer, no matter how conscientious, to justify expending the time and effort complying with the Rules when a top competitor is circumventing the Rules with little or no risk of penalty. Without a strong and visible enforcement program in place, AFCCE believes that the effectiveness of the FCC's Rules can be severely diminished to the point of being totally ineffective.

#### **Authorization of Modular Components and Modular Personal Computers**

The Commission has proposed, in the "Notice", permitting individual authorization of modular computer components, specifically, CPU boards, power supplies and enclosures. This would allow manufacturers and suppliers to construct a personal computer from authorized modular components and self declare compliance of the final computer system with no further testing required. In addition it would allow the interchange of authorized modular components without further testing of the modified system. This proposal is a major divergence from the systems approach currently in place and if adopted presents a significant risk of widespread interference to communications services.

The advantages of a modular equipment authorization are certainly of great value to the computer industry, but at what interference risk to other communications services should we be willing to adopt such Rule changes? The current Rules require testing of each new personal computer systems to insure, with high probability, that the final system, delivered to the consumer, will not result in harmful interference. If adopted, the proposed Rules will permit testing of only the components of a system while the requirement to test the final assembled system will be eliminated. This proposal, if adopted, could have catastrophic impact on important communications services. AFCCE is opposed to any change to the FCC's Rules which would eliminate compliance testing of the final assembled system.

It is well known that the magnitude of emissions radiated from a personal computer system is dependent on the complex relationship between the components of the system including: the CPU board(s), interconnecting cables, peripherals, the chassis and ground system,

filtering, etc. The interaction between subassemblies of a computer system is as great a factor in generating potentially harmful radiated emissions as the contribution from the individual subassemblies taken alone. That is, with regard to radiated emissions, the whole can be greater than the sum of the parts.

The Commission, in proposing to eliminate compliance testing of the final assembled system, fails to focus on the fact that it is the final system configuration, possibly more than any other factor, which determines whether or not a system will be compliant. AFCCE believes that the Commission has greatly underestimated the risk of harmful interference that is inherent in this proposal. Further, AFCCE believes that this proposal lacks a sound engineering foundation. For these reasons AFCCE strongly opposes adoption of the proposed Rules pertaining to authorization of modular computers and components.

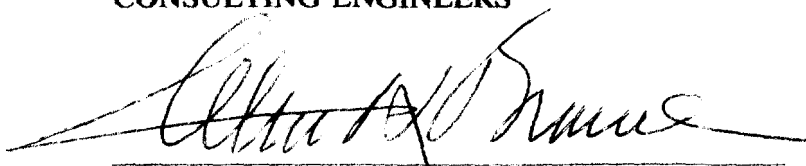
### **Summary**

AFCCE believes that the proposals contained in the "Notice" pose far too great a risk of harmful interference to communications services and, therefore, should not be adopted as stated in the "Notice". With regard to the proposal to replace the present Certification requirement with a self Declaration of Compliance, AFCCE has presented two alternatives, each of which incorporates appropriate safeguards to minimize the risk of harmful interference.

AFCCE strongly opposes the Commission's proposal to authorize modular computers without the requirement to perform compliance tests on the final assembled system. We believe that this proposal lacks a sound engineering foundation and, if adopted, has the potential to result in widespread, harmful interference to other communications services.

Respectfully submitted,

ASSOCIATION OF FEDERAL COMMUNICATIONS  
CONSULTING ENGINEERS

A handwritten signature in black ink, appearing to read "John F. X. Browne", written over a horizontal line.

John F. X. Browne  
President

June 2, 1995